

Australasian Health Facility Guidelines

Part E - Building Services and Environmental
Design
0004 - Fire

Uncontrolled when printed

COPYRIGHT AND DISCLAIMER

Copyright

© 2015 Australasian Health Infrastructure Alliance

The Australasian Health Facility Guidelines (AusHFG) and the information in them are the copyright of the Australasian Health Infrastructure Alliance (AHIA). The information in the AusHFG is made freely available.

Australasian Health Facility Guidelines

Address: PO Box 1060, North Sydney NSW 2059
Website: <http://www.healthfacilityguidelines.com.au>
Email: webmaster@healthfacilityguidelines.com.au

The AusHFGs are an initiative of the Australasian Health Infrastructure Alliance (AHIA). AHIA membership is comprised of representatives from government health infrastructure planning and delivery entities in all jurisdictions in Australia and New Zealand.

Disclaimer

AHIA gives no warranty or guarantee that the information in the AusHFG is correct, complete or otherwise suitable for use. AHIA shall not be liable for any loss howsoever caused whether due to negligence or otherwise arising from the use of or reliance on this information.

AHIA recommends that those seeking to rely on the information in the AusHFG obtain their own independent expert advice.

Index

04 FIRE	4
04.01 Scope	4
04.02 General	4
04.03 Design	4

04 FIRE

04.01 Scope

Fire services that should be considered in the Design Brief include:

- fire detection and suppression systems;
- hydrants and hose reels;
- portable extinguishers;
- smoke control and air pressurisation (refer to Mechanical Section);
- signs and evacuation plans;
- warning and information systems;
- water supply; and
- water storage.

04.02 General

Fire protection is usually designated as an Active or Passive system. Both require consideration in the preliminary design stages.

Active systems involve engineering services solutions. Passive systems include compartments, egress routes, and fire and smoke rated construction. The employment of active systems can influence both the building design, and the extent and cost of passive provisions.

04.03 Design

The following active systems may require equipment enclosures and adequate access for fire fighting personnel and equipment:

- external hydrants / hose reel layout;
- fire control rooms;
- pumps, tanks, sprinkler boosters;
- water supply and distribution issues; and
- fire detection system.

The passive systems may include:

- compartmentation;
- construction;
- fire egress arrangements; and
- fire separation.

The requirement for sprinklers for example will add a vertical component to the ceiling space requirement, which in turn will affect the overall building height.

Passive solutions can play a major role in early planning and particular consideration should be given to compartment size and design. By building in flexibility and area safety margins, changes in briefing can be

anticipated and incorporated in later planning. The repositioning or addition of an egress stair as a result of modifications to compartment and egress layout can be difficult and costly.